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| EXAMINER | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/596,014 | OLSSON ET AL. | |
| | Examiner | Art Unit | |
| | Bryan Pitt | 2617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *19 November 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *22-26 and 35-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-26 and 35-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application.
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment was received 19 November 2009 and has been entered. Claims 35-36, 39-40 and 42 were amended. Claims 27-34 were canceled. Claims 22-26 and 35-42 are pending.

### *Response to Arguments*

2. Applicant's arguments filed 19 November 2009 have been fully considered but they are not persuasive.

3. Applicant's arguments with regards to the use of US 2008/0096523 (Lundin) as a reference have been fully considered and are persuasive. Therefore, the rejection of claims 29-30, 32, 36-38 and 41 under 35 USC 103(a) as being unpatentable over US 2004/0266394 (Mizell) in view of Lundin has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references as more fully explained in the Claims Rejection section below.

4. Applicant's arguments with respect to claims 22-26 and 35-42 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 22-24, 26, 35-38, and 40-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0266394 to Mizell et al. (hereafter "Mizell '394") in view of US 2003/0125013 to Mizell et al. (hereafter "Mizell '013").

Regarding **claim 22**, Mizell '394 teaches a method of communicating charging information for a particular mobile station in a network including at least a serving node and a gateway node, comprising the following steps:

receiving, at said gateway node, a data packet comprising a header and a payload (i.e. Mizell '394 teaches a GGSN (gateway GPRS service node) downloading a data packet from an IP network; paragraph 0030. IP packets are known to comprise headers and payloads);

identifying a particular Packet Data Protocol (PDP) context for a particular mobile station (i.e. the GGSN downloads the packet upon request by a MN (mobile node) for which a PDP context has been created and delivers the packet to the MN via a SGSN (serving GPRS support node), therefore identifying a particular PDP context; paragraph 0030, 0032);

gathering, at said gateway node and from said received data packet, charging information relating to said PDP context (i.e. the GGSN extracts charging information; paragraph 0014. The GGSN inspects the packet for content to extract charging information; paragraph 0014, 0030);

creating a GPRS Tunneling Protocol (GTP) packet data unit, said GTP packet data unit including a header, a payload, and a pre-determined extension header (i.e. GGSN creates a GTP packet by encapsulating the downloaded data packet;

paragraphs 0014, 0030. The GGSN uses a GTP extension header to communicate charging information to the SGSN; paragraph 0013); and

transmitting, from said gateway node to said serving node, said GTP packet data unit containing said charging information (i.e. GGSN forwards the GTP packet to the SGSN; paragraph 0014. The GTP packet contains charging information; paragraphs 0013, 0030, 0033);

wherein said charging information relates to said PDP context for said mobile station (i.e. the charging information relates to the packet requested by the MN under the PDP context; paragraph 0014), said pre-determined extension header is reserved for *accounting* information pertaining to at least one IP packet payload for said PDP context (i.e. the extension header is used to provide accounting information including content information and charging rate pertaining to the data packet, therefore reserved; paragraphs 0030, 0033) and said header comprises a next extension header type indicating that said pre-determined service class extension header follows (i.e. the next extension header flag is used; paragraph 0036).

Mizell '394 does not specifically teach that the extension header is a *service class* header is reserved for *service class* information pertaining to at least one IP packet payload for said PDP context; however, at the time the invention was made the above limitation was well known in the art of communications because it allowed for .

Mizell '013 teaches multi-rate billing in a mobile telecommunications network based on the services provided to a mobile device; abstract, paragraphs 0005, 0039. Network operators can use differentiated classes of service to control network traffic to

give greater precedence to certain types of traffic and can charge different tariffs based on the class of service used (i.e. higher tariffs are charged when a user accesses a data network over a higher quality of service level); see paragraphs 0010-11, 0036-37. It would be apparent to one skilled in the art that by modifying the content information included in the GTP packet of Mizell '394 to indicate the differentiated service level, network operators could control network traffic and charge users according to the level of service received. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the content information of Mizell '394 to include an indication of the differentiated class of service as taught by Mizell '013 in order to control network traffic and charge users according to the level of service received.

Regarding **claim 23**, the combination of Mizell '394 and Mizell '013 teaches the method according to claim 22, wherein said network includes a charging node associated with said serving node, the method further comprising the following steps after said transmitting step:

receiving, at said serving node, said charging information (i.e. Mizell '394 teaches the SGSN receiving the GTP packet from the GGSN; paragraph 0032); and

sending, from said serving node to said charging node, information corresponding to said charging information (i.e. Mizell '394 teaches the SGSN sending a charging record to the CGF (charging gateway function); paragraph 0035).

Regarding **claim 24**, the combination of Mizell '394 and Mizell '013 teaches the method according to claim 22, wherein said gathering step further comprises the following steps:

performing a packet inspection of said received data packet (i.e. Mizell '394 teaches the GGSN inspects the packet for content, source, and destination; paragraph 0030); and

assigning a predefined service class for said data packet based on said packet inspection (i.e. Mizell '013 teaches a GGSN inspecting a packet for class of service markings and charging the user accordingly; paragraphs 0036. 0039-40. It would have been obvious to one skilled in the art to inspect the packet for class of service in order to control network traffic and charge users according to the level of service received).

Regarding **claim 26**, the combination of Mizell '394 and Mizell '013 teaches the method according to claim 22, wherein said network comprises a GPRS network, said serving node comprises a Serving GPRS Support Node, and said gateway node comprises a Gateway GPRS Support Node (i.e. Mizell '394 teaches a GPRS network with GGSN and SGSN nodes; paragraph 0025).

Regarding **claim 35**, Mizell '394 teaches a gateway node for communicating within a system performing packet inspection and service classification, said system including a packet data network and a serving node, wherein IP data packets may be communicated for identification of a given predetermined service class out of a plurality of predetermined service classes within said system, said gateway node comprising:

means for receiving, at said gateway node, an IP data packet from said packet data network (i.e. GGSN receives a data packet from an IP network, therefore a receiver on a network port; paragraph 0025, 0030, 0039);

means for extracting the payload of said IP data packet (i.e. GSGN inspects the payload of a downloaded IP packet, therefore a processor for extracting a payload; paragraph 0030, 0040);

means for determining a value, out of a plurality of values corresponding to a plurality of different *content types*, said determined value corresponding to a *content type* for said payload (i.e. GGSN assigns a charging rate for each downloaded packet based on the packet contents, therefore a processor for determining a value; paragraph 0030, 0041);

means for assigning said determined *content type* to a extension header (i.e. GGSN creates a GTP extension header containing content information and charging rate for each downloaded packet based on the packet contents, therefore a processor for assigning; paragraphs 0030, 0040);

means for creating a packet data unit by including said extension header (i.e. GGSN creates a GTP packet including the GTP extension header containing content information and charging rate; paragraphs 0036-37, 0044);

means for inserting said payload in said packet data unit; (i.e. GGSN creates a GTP packet by encapsulating the downloaded packet, therefore a processor for creating packets; paragraphs 0030, 0033, 0040, 0044); and

means for transmitting said packet data unit from said gateway node to said serving node (i.e. GGSN transfers the GTP packet to a SGSN, therefore a transmitter on a Gn interface; paragraph 0030, 0039).

Mizell '394 does not specifically teach that the *content type* is a *service class* and that the extension header is a *service class* extension header; however, at the time the invention was made the above limitations were well known in the art of communications.

Mizell '013 teaches multi-rate billing in a mobile telecommunications network based on the services provided to a mobile device; abstract, paragraphs 0005, 0039. Network operators can use differentiated classes of service to control network traffic to give greater precedence to certain types of traffic and can charge different tariffs based on the class of service used (i.e. higher tariffs are charged when a user accesses a data network over a higher quality of service level); see paragraphs 0010-11, 0036-37. It would be apparent to one skilled in the art that by modifying the content information included in the GTP packet of Mizell '394 to indicate the differentiated service level, network operators could control network traffic and charge users according to the level of service received. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the content information of Mizell '394 to include an indication of the differentiated class of service as taught by Mizell '013 in order to control network traffic and charge users according to the level of service received.

Regarding **claim 36**, Mizell '394 teaches a serving node for communicating with a charging node, said serving node comprising:

means for receiving a packet data unit comprising a extension header (i.e. SGSN receives a GTP packet with an extension header from a GGSN, therefore a receiver on a Gn interface; paragraph 0033, 0039);

means for determining a value from said extension header (i.e. SGSN extracts the charging information from the GTP extension header, therefore a processor for analyzing GTP packets; paragraph 0033, 0041);

means for determining a volume count, for a given *content type* and a given PDP context (i.e. the SGSN analyzes the GTP packet header to determine the packet data volume and the charging rate of the content; paragraphs 0028, 0031, 0036, 0041);

means for storing said volume count (i.e. SGSN keeps track of the volume of packets delivered, therefore a processor and memory for storing volume; paragraphs 0028, 0031, 0035, 0039, 0045);

means for transmitting a payload data associated with said PDP context (i.e. SGSN forward the packet to the MN via a BSC or RNC, therefore a transmitter on a Gb or Iu interface; paragraph 0025, 0033, 0039); and

means for sending associated values of said determined value and said volume count from said serving node to said charging node (i.e. SSGN sends a CDR containing volume count and charging info (service class value) to the CGF, therefore a transmitter for communicating with a charging node; paragraph 0035, 0039).

Mizell '394 does not specifically teach that the value is a *service class* value, that a *content-type* is a *service class*, and that the extension header is a *service class* extension header; however, at the time the invention was made the above limitations were well known in the art of communications.

Mizell '013 teaches multi-rate billing in a mobile telecommunications network based on the services provided to a mobile device; abstract, paragraphs 0005, 0039.

Network operators can use differentiated classes of service to control network traffic to give greater precedence to certain types of traffic and can charge different tariffs based on the class of service used (i.e. higher tariffs are charged when a user accesses a data network over a higher quality of service level); see paragraphs 0010-11, 0036-37. It would be apparent to one skilled in the art that by modifying the content information included in the GTP packet of Mizell '394 to indicate the differentiated service level, network operators could control network traffic and charge users according to the level of service received. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the content information of Mizell '394 to include an indication of the differentiated class of service as taught by Mizell '013 in order to control network traffic and charge users according to the level of service received.

Regarding **claim 37**, Mizell '394 teaches a serving node for communicating with a charging node, said serving node comprising:

means for receiving a packet data unit comprising a extension header (i.e. SGSN receives a GTP packet with an extension header from a GGSN, therefore a receiver on a Gn interface; paragraph 0033, 0039);

means for extracting a value and a volume count from said extension header (i.e. the SGSN analyzes the GTP packet header to extract the packet data volume and the charging information of the content, therefore a processor to extract value and volume count; paragraphs 0028, 0031, 0033, 0036, 0041);

means for storing said volume count from said extension header, said volume count relating to a given *content type* and a given PDP context (i.e. SGSN keeps track

of the packet data volume and charging information for subscriber content delivered to a MN through a PDP context, therefore a processor and memory for storing volume; paragraph 0039, 0045);

means for transmitting payload data associated with said PDP context (i.e. SGSN forward the packet to the MN via a BSC or RNC, therefore a transmitter on a Gb or Iu interface; paragraph 0025, 0033, 0039); and

means for sending associated values of said *content type* and said volume count from said serving node to said charging node (i.e. SSGN sends a CDR containing packet data volume count and charging information for subscriber content to a CGF, therefore a transmitter for communicating with a charging node; paragraph 0035, 0039).

Mizell '394 does not specifically teach that the value is a *service class* value, that a *content-type* is a *service class*, and that the extension header is a *service class* extension header; however, at the time the invention was made the above limitations were well known in the art of communications.

Mizell '013 teaches multi-rate billing in a mobile telecommunications network based on the services provided to a mobile device; abstract, paragraphs 0005, 0039. Network operators can use differentiated classes of service to control network traffic to give greater precedence to certain types of traffic and can charge different tariffs based on the class of service used (i.e. higher tariffs are charged when a user accesses a data network over a higher quality of service level); see paragraphs 0010-11, 0036-37. It would be apparent to one skilled in the art that by modifying the content information included in the GTP packet of Mizell '394 to indicate the differentiated service level,

network operators could control network traffic and charge users according to the level of service received. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the content information of Mizell '394 to include an indication of the differentiated class of service as taught by Mizell '013 in order to control network traffic and charge users according to the level of service received.

Regarding **claim 38**, the combination of Mizell '394 and Mizell '013 teaches the serving node according to claim 37, wherein said volume count is associated with an accumulated volume count pertaining to a given PDP context (i.e. Mizell '013 teaches that both the GGSN and the SGSN independently calculate and store accumulated traffic volumes associated with a PDP data session; paragraphs 0007, 0039-40. Mizell '394 teaches sending packet data volume information relating to subscriber content from the GGSN to the SGSN; paragraphs 0030, 0036, 0041. It would have been obvious to one skilled in the art to modify the content information of Mizell '394 that is passed from the GGSN to the SGSN to include accumulated totals as taught by Mizell '013 so that the SGSN does not have to independently calculate the accumulated volume, thereby saving system resources).

Regarding **claim 40**, the combination of Mizell '394 and Mizell '013 teaches the serving node according to claim 38, wherein said accumulated volume is accumulated from classified and/or incompletely classified payload volumes, said accumulated volume count is being maintained as long as said PDP context is active (i.e. Mizell '013 teaches that when the GGSN receives a new packet it checks to see if the packet belongs to a differentiated service class for which a counter exists; paragraphs 0040-41.

If the differentiated service marking do not match an existing counter (i.e. incompletely classified) a new counter is created for the packet, therefore there are counters for classified (i.e. having matching differentiated service markings) and incompletely classified (i.e. having non-matching differentiated service markings) packet volumes. It would have been obvious to one skilled in the art to modify the content information of Mizell '394 that is passed from the GGSN to the SGSN to include accumulated totals as taught by Mizell '013 so that the SGSN does not have to independently calculate the accumulated volume, thereby saving system resources).

Regarding **claim 41**, Mizell '394 teaches a gateway node for communicating within a system performing packet inspection and service classification, said system comprising a packet data network and a serving node, wherein IP data packets comprising payload data may be communicated for identification of a given predetermined service class out of a plurality of predetermined service classes within said system, said gateway node comprising:

means for receiving, from a packet data network, an IP data packet in a continuous downstream of IP data packets associated with a given PDP context (i.e. GGSN receives a data packet from an IP network on request from a MN through a PDP context, therefore a receiver on a network port; paragraph 0025, 0030, 0039);

means for receiving a *content-type* identification for said IP data packet (i.e. the GGSN inspects the packet for content, therefore a processor for receiving identification for said data packet; paragraph 0030);

means for storing an aggregated volume count associated with payload data associated with said PDP context (i.e. the GGSN stores the packet volume count for the PDP context, therefore a memory for storing an aggregated volume count; paragraphs 0028, 0031);

means for storing information associated with IP data packets for said PDP context (i.e. the GGSN stores the packet volume count for the PDP context, therefore a memory for storing information associated with data packets; paragraphs 0028, 0031);

means for identifying a content-type for the payload data of said IP data packet, said payload data being associated with said PDP context (i.e. the GGSN inspects the packet for content, therefore a processor for identifying; paragraphs 0030, 0041);

means for storing an aggregated volume count for payload data associated with said PDP context (i.e. the GGSN stores the packet volume count for the PDP context, therefore a memory for storing an aggregated volume count; paragraphs 0028, 0031);

means for assigning said identified *content-type* to an extension header (i.e. the GGSN uses a GTP extension header to communicate charging information to the SGSN; paragraphs 0030, 0033, 0036-37. The charging information includes content information and a charging rate; paragraph 0030);

means for assigning an volume count for payload data of said PDP context to said extension header (i.e. the GGSN include information on the payload size in the GTP packet header and extension header; paragraphs 0036-37, Fig. 4);

means for inserting said extension header and said payload data in a packet data unit; (i.e. GGSN creates a GTP packet by encapsulating the downloaded packet and

adding an extension header, therefore a processor for creating packets; paragraph 0030, 0033, 0040); and

means for transmitting said packet data unit to said serving node (i.e. GGSN transfers the GTP packet to a SGSN, therefore a transmitter on a Gn interface; paragraph 0030, 0039).

Mizell '394 does not specifically teach that a *content-type* is a *service class*, that payload data is *incompletely classified* payload data, that an extension header is a *service class* extension header, or that *previous* payload data is *previously incompletely classified* payload data, nor does Mizell '394 specifically teach means for determining whether said IP data packet is incompletely classified or means for assigning an *aggregated* volume count for *previously incompletely classified* payload data to said extension header; however, at the time the invention was made the above limitations were known in the art of communications.

Mizell '013 teaches multi-rate billing in a mobile telecommunications network based on the services provided to a mobile device; abstract, paragraphs 0005, 0039. Network operators use differentiated classes of service (DS) to control network traffic to give greater precedence to certain types of traffic and can charge different tariffs based on the class of service used; paragraphs 0010-11, 0036-37. When the GGSN receives a new packet it examines the DS markings to see if the packet matches a DS class for which a counter exists and crates a new counter for DS if the packet does not match an existing counter (i.e. incompletely classified); paragraphs 0040-41. Both the GGSN and the SGSN independently calculate and store accumulated traffic volumes associated

with each DS class for a PDP session; paragraphs 0007, 0039-40. Mizell '394 teaches sending packet data volume information relating to subscriber content from the GGSN to the SGSN; paragraphs 0030, 0036, 0041. It would be apparent to one skilled in the art that by modifying the content information of Mizell '394 that is passed from the GGSN to the SGSN to include accumulated totals as taught by Mizell2, the SGSN would not have to independently calculate the accumulated volume, thereby saving system resources. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the content information of Mizell '394 to include an indication of the differentiated class of service and the accumulated volume total for each class of service, as taught by Mizell2, in order to control network traffic, charge users according to the level of service received, and save system resources.

Regarding **claim 42**, Mizell '394 teaches a gateway node for communicating within a system performing packet inspection and service classification, said system comprising a packet data network and a serving node, wherein IP data packets comprising payload data may be communicated for identification of a given predetermined service class out of a plurality of predetermined service classes within said system, said gateway node comprising:

means for receiving IP data packets in a continuous stream of IP data packets associated with a given PDP context (i.e. GGSN receives a data packet from an IP network, therefore a receiver on a network port; paragraph 0025, 0030, 0039);

means for determining the *content-type* of the payload data of said IP data packets associated with said PDP context payload (i.e. the GGSN inspects the packet

for content, therefore a processor for determining packet content type; paragraph 0030, 0041);

means for storing an accumulated downlink volume count associated with said content-type (i.e. the GGSN stores the packet volume count and charging rate for content provided to a subscriber for a PDP context, therefore a memory for storing an accumulated volume count; paragraphs 0028, 0031)

means for generating extension headers for downstream payload, said headers containing said content-type and said downlink volume count (i.e. the GGSN uses a GTP extension header to communicate charging information to the SGSN and includes information on the payload size in the GTP packet header and extension header; paragraphs 0030, 0033, 0036-37, Fig. 4. The charging information includes content information and a charging rate; paragraph 0030);

means for inserting said extension headers for downstream payload in packet data units (i.e. GGSN creates a GTP packet including a GTP extension header, therefore a processor for inserting extension headers into packets; paragraph 0030, 0033, 0040);

means for inserting said payload data in packet data units (i.e. GGSN creates a GTP packet by encapsulating the downloaded packet, therefore a processor for inserting payload data into packets; paragraph 0030, 0033, 0040); and

means for transmitting said packet data units to said serving node (i.e. GGSN transfers the GTP packet to a SGSN, therefore a transmitter on a Gn interface; paragraph 0030, 0039).

Mizell '394 does not specifically teach that the stream of packets is an *upstream*, that a *content-type* is a *service class*, that the extension header is a *service class* extension header, or that the headers contain an *accumulated* volume count, nor does Mizell '394 specifically teach means for storing an accumulated uplink volume count associated with said content-type, or means for generating extension headers for upstream payload, said headers containing said content-type and said accumulated uplink volume count; however, at the time the invention was made the above limitations were known in the art of communications.

Mizell '013 teaches multi-rate billing in a mobile telecommunications network based on the services provided to a mobile device; abstract, paragraphs 0005, 0039. Network operators use differentiated classes of service (DS) to control network traffic to give greater precedence to certain types of traffic and can charge different tariffs based on the class of service used; paragraphs 0010-11, 0036-37. A GGSN receives a new packet on the uplink or downlink and examines the DS markings to see if the packet matches a DS class for which a counter exists and crates a new counter for DS if the packet does not match an existing counter (i.e. incompletely classified); paragraphs 0040-41. Both the GGSN and the SGSN independently calculate and store accumulated uplink and downlink traffic volumes associated with each DS class for a PDP session; paragraphs 0007, 0039-40. Mizell '394 teaches sending packet data volume information relating to subscriber content from the GGSN to the SGSN; paragraphs 0030, 0036, 0041. It would be apparent to one skilled in the art that by modifying the content information of Mizell '394 that is passed from the GGSN to the

SGSN to include accumulated totals as taught by Mizell2, the SGSN would not have to independently calculate the accumulated volume, thereby saving system resources. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the content information of Mizell '394 to include an indication of the differentiated class of service and the accumulated volume total for each class of service, as taught by Mizell2, in order to control network traffic, charge users according to the level of service received, and save system resources.

7. **Claims 25 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizell '394 and Mizell '013 as applied to claims 23 and 37 above, and further in view of US 2002/0058496 to Bos et al.

Regarding **claim 25**, the combination of Mizell '394 and Mizell '013 teaches the method according to claim 23, but does not specifically teach wherein said charging node comprises a CAMEL SCP node and said charging information is signaled by means of the CAP protocol. However, at the time the invention was made the above limitation was known in the art of communications.

Bos teaches a GPRS network comprising CAMEL nodes that uses a CAP protocol interface to communicate charging information between the bearer level system (i.e. the GGSN and the SGSN) and a CAMEL SCP (service control point) in order to remove the need for a separate charging interface and thus optimize the network architecture. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the charging function of Mizell '394 and Mizell

'013 to incorporate a CAMEL architecture as taught by Bos in order to optimize the network architecture.

Regarding **claim 39**, the combination of Mizell '394 and Mizell '013 teaches the serving node according to claim 37, but does not specifically teach wherein said charging node is a CAMEL node and the procedures used by at least one of said means for communicating with said CAMEL node is following CAMEL reporting procedures. However, at the time the invention was made the above limitation was known in the art of communications.

Bos teaches a GPRS network comprising CAMEL nodes that uses a CAP protocol interface to communicate charging information between the bearer level system (i.e. the GGSN and the SGSN) and a CAMEL SCP (service control point) in order to remove the need for a separate charging interface and thus optimize the network architecture. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the charging function of Mizell '394 and Mizell '013 to incorporate a CAMEL architecture as taught by Bos in order to optimize the network architecture.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Pitt whose telephone number is (571) 270-7466. The examiner can normally be reached on Monday - Friday 9:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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